

Fig. 1

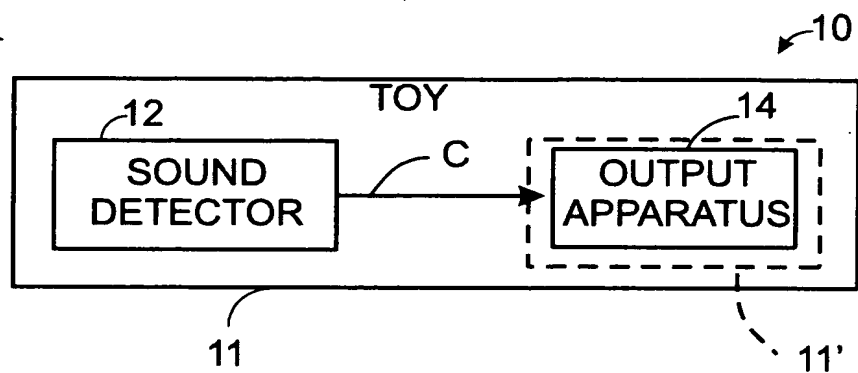


Fig. 2

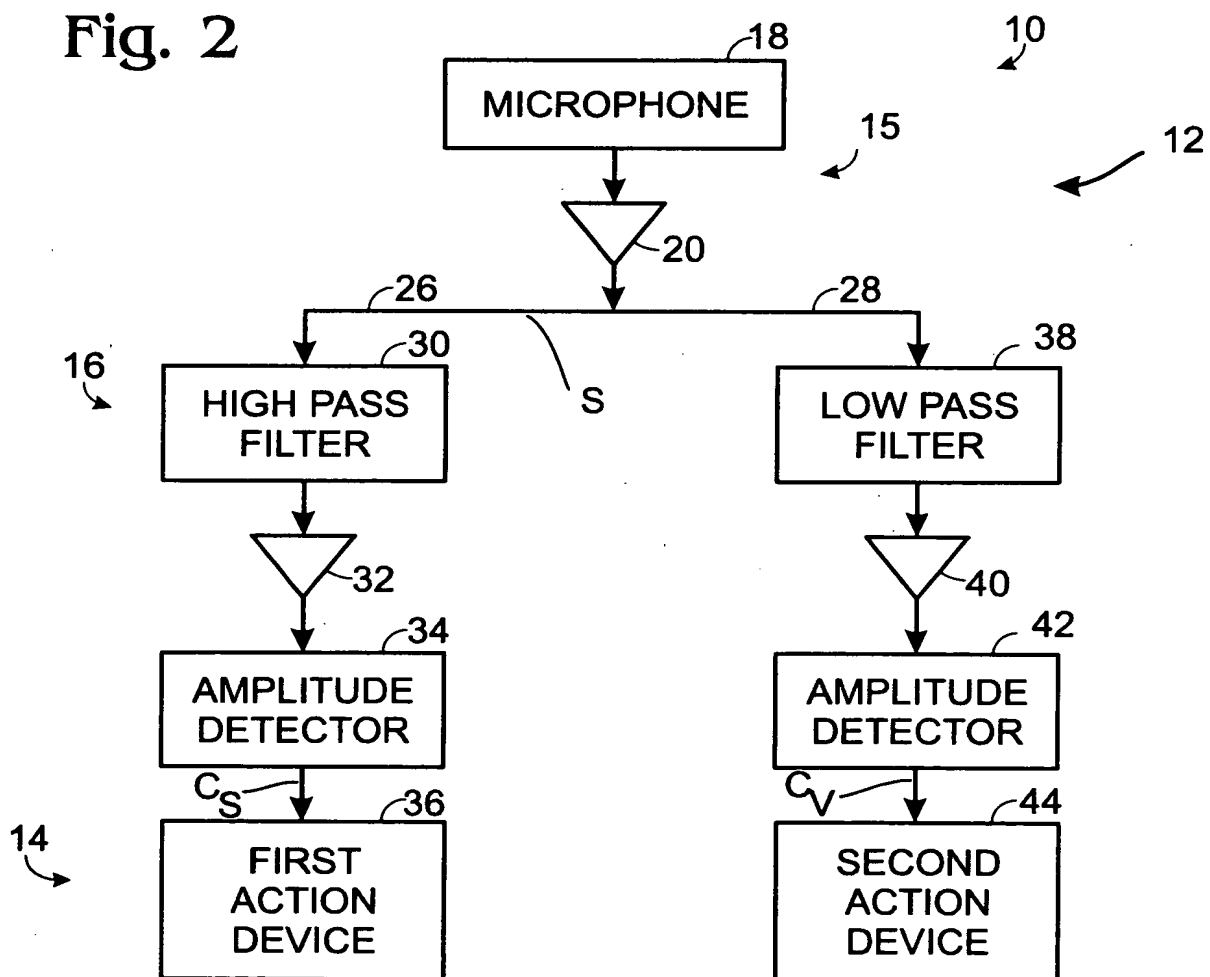


Fig. 3

The circuit diagram illustrates a multi-stage electronic device 10. The input stage 12 features a microphone 18 connected to a network of resistors (10K, 30K, 100K) and capacitors (10μF, .01μF) powered by 3-5V sources. This stage includes two 9014 transistors (22, 24) and a signal path 20 leading to a .1μF capacitor and a 470K resistor, with a test point TP1. The signal processing stage 14 contains two op-amp sections. The first section 28 uses an op-amp (pins 1, 2, 3, 4, 11, 40) with various feedback and input components (91K, 100K, 120K, .01μF, .001μF) and a 3-5V supply. The second section 30 uses an LM324 op-amp (pins 9, 10, 8) with a 3-5V supply, IN4148 diodes, and various resistors (100K, 47K, 140K, 500pF). Test points TP2 and TP3 are indicated. The output stage 16 drives two LEDs: a YELLOW LED 52 and a RED LED 46, each with a 9014 transistor (54, 48) and a 10K resistor. The LEDs are connected to a common output line 44 through capacitors CV and CS. The circuit is powered by multiple 3-5V sources and includes various passive components like resistors (10K, 100K, 120K, 100Ω, 680K, 100K, 500pF) and capacitors (10μF, .01μF, .001μF, .1μF, 1μF).

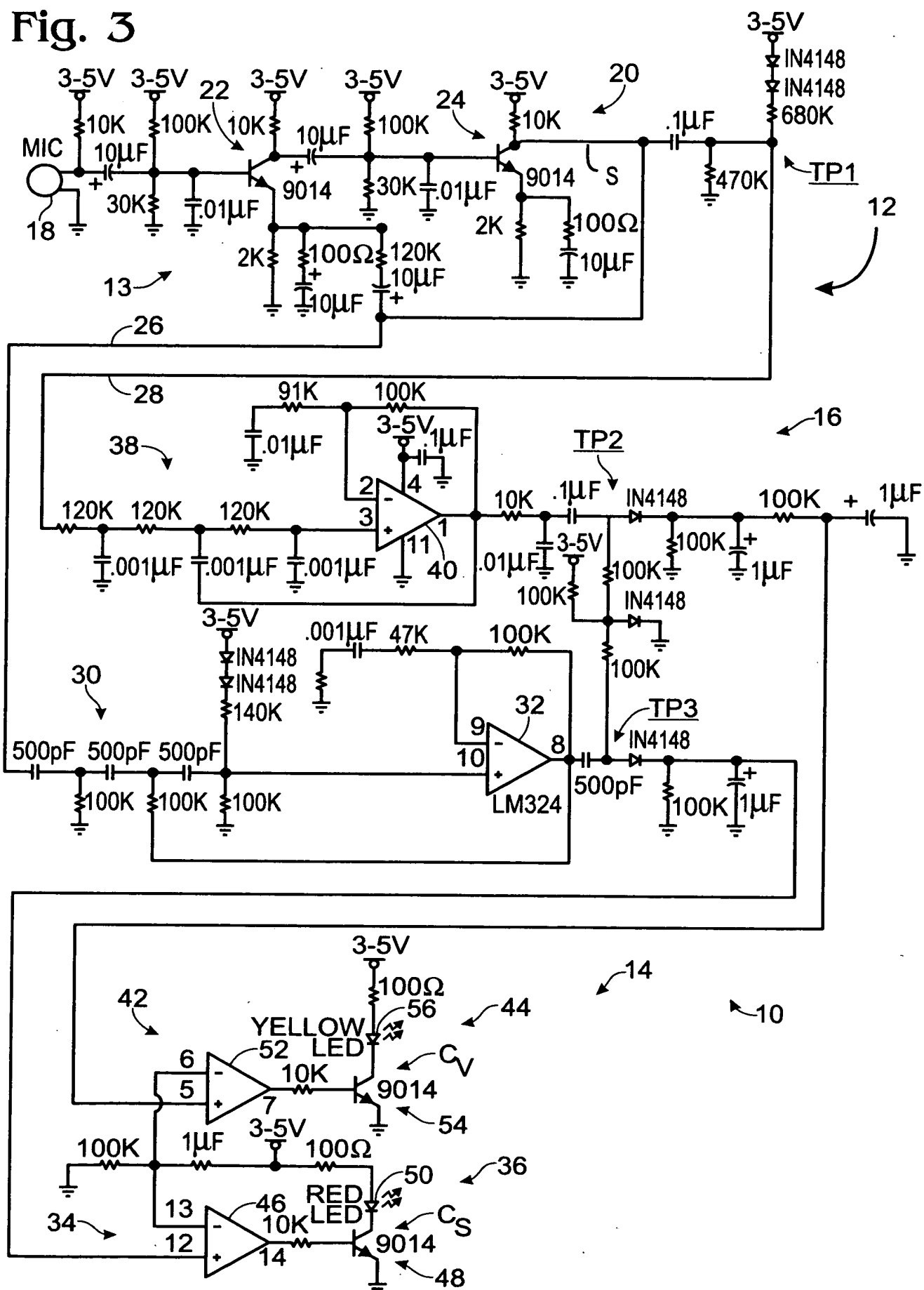


Fig. 4

FREQ. (Hz)	TP1		TP2		TP3	
	GAIN	dB	GAIN	dB	GAIN	dB
10	20.03	26.0	4.17	12.4		
20	53.26	34.5	19.44	25.8		
50	155.90	43.9	105.56	40.5		
100	277.95	48.9	269.44	48.6		
200	385.09	51.7	452.78	53.1		
500	434.78	52.8	627.78	56.0		
1K	433.22	52.7	588.89	55.4	1.19	1.5
2K	409.94	52.3	84.72	38.6	8.89	19.0
5K	304.35	49.7	1.82	5.2	144.44	43.2
10K	188.20	45.5			613.89	55.8
20K	103.11	40.3			286.11	49.1
50K	38.98	31.8			98.61	39.9
100K	16.30	24.2			33.33	30.5
200K	4.50	13.1			9.72	19.8

Fig. 5

